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Daniel J. Marchok

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EXAMINER

YUEN, KAN

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/813,695	Applicant(s) MARCHOK ET AL.	
	Examiner KAN YUEN	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 42-52 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 42-52 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Arguments

1. Applicant's arguments with respect to claim 42-52 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 42, 46, 48, and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozaki (Pat No.: 5502749), In view of Kesner et al. (Pat No.: 6055362).

For claim 42, Ozaki disclosed the method of searching for a pilot tone by scanning a frequency range in predetermined frequency steps (Ozaki column 1, lines 10-25). A terminal device sequentially scans 124 channels previously set to detect a

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channel at which the electric field strength is most intense. The device then detects a BCCH, wherein BCCH has time slots through which various transmission signals are transmitted; recovering a pilot tone sub-symbol (**see column 2, lines 55-62**). The receiver unit demodulates or recovers the transmission signal; calculating a parameter value difference between the pilot tone sub-symbol and a consecutive pilot tone sub-symbol (**see column 2, lines 65-67, and see column 3, lines 1-2**). The phase shift detection unit detects the phase shift between the reference signal and the received signal. The phase shift can be interpreted as the difference parameter value, and the received signal can be the pilot tone sub-symbol, and the reference signal can be the consecutive pilot tone sub-symbol.

However, Ozaki did not disclose the method of adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone. Kesner et al. from the same or similar fields of endeavor teaches the method of adjusting a clock signal frequency depending on the parameter value difference to lock on a phase and frequency of the pilot tone (**column 7, lines 54-67, column 8, lines 1-10, fig. 5**). Any output from the phase detector 52A representing a phase difference being use to appropriately adjust the frequency of oscillation of VCO 54A to obtain phase lock in which PHP2A and PHP2B signals are in phase. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Kesner et al. in the network of Ozaki. The motivation for using the method as taught by Kesner et al. in the network of Ozaki being that it reduces error transmission rate.

Regarding claim 46, Ozaki disclosed the method of the parameter comprises phase **(see column 2, lines 65-67, and see column 3, lines 1-2)**. The phase shift detection unit detects the phase shift between the reference signal and the received signal. The phase shift can be interpreted as the difference parameter value, and the received signal can be the pilot tone sub-symbol, and the reference signal can be the consecutive pilot tone sub-symbol.

Claim 48 is rejected similar to claim 1.

Regarding claim 51, Ozaki disclosed the method of the parameter comprises phase **(see column 2, lines 65-67, and see column 3, lines 1-2)**. The phase shift detection unit detects the phase shift between the reference signal and the received signal. The phase shift can be interpreted as the difference parameter value, and the received signal can be the pilot tone sub-symbol, and the reference signal can be the consecutive pilot tone sub-symbol.

5. Claims 43, 44, and 50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozaki (Pat No.: 5502749), In view of Kesner et al. (Pat No.: 6055362), as applied to claim 42 above, and further in view of Nakano et al. (Pat No.: 5559789).

For claim 43 is Ozaki and Kesner et al. disclosed all the subject matter of the claimed invention with the exception of recovering the pilot tone sub-symbol comprises adjusting the clock signal frequency so that the pilot tone sub-symbol can be received.

Nakano et al. from the same or similar fields of endeavor teaches the method of recovering the pilot tone sub-symbol comprises adjusting the clock signal frequency so that the pilot tone sub-symbol can be received (**see column 3, lines 62-67, and see column 4, lines 1-5**). The frequency adjustment is used to compensate the phase difference, so that pilot signal can be received correctly. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Nakano et al. in the network of Ozaki and Kesner et al. The motivation for using the method as taught by Nakano et al. in the network of Ozaki and Kesner et al. being that the method will lower the transmission error rate between the transmitter and the receiver.

Regarding claim 44, Nakano also disclosed the method of identifying the pilot tone sub-symbol (**see column 4, lines 1-6**). The detector 24 detects the frequency offset, where frequency comprises signal or pilot tone sub-symbol.

Regarding claim 50, Nakano also disclosed the method of an identifier of the pilot tone sub-symbol (**see column 4, lines 1-6**). The detector 24 detects the frequency offset, where frequency comprises signal or pilot tone sub-symbol.

6. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ozaki (Pat No.: 5502749), In view of Kesner et al. (Pat No.: 6055362), and Nakano et al. (Pat No.: 5559789), as applied to claim 44 above, and further in view of Ojanpera et al. (Pat No.: 5703873).

For claim 45, Ozaki, Kesner et al. and Nakano et al. disclosed all the subject matter of the claimed invention with the exception of scanning a plurality of bins to locate a bin containing the pilot tone sub-symbol. Ojanpera et al. from the same or similar fields of endeavor teaches the method of scanning a plurality of bins to locate a bin containing the pilot tone sub-symbol (**see column 4, lines 48-52**). The subscriber equipment scans the frequency band or bins to locate the pilot transmission or pilot tone sub-symbol. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Ojanpera et al. in the network of Ozaki, Kesner et al. and Nakano et al. The motivation for using the method as taught by Ojanpera et al. in the network of Ozaki, Kesner et al. and Nakano et al. being that the method will increase the accuracy of receiving signals.

7. Claims 47, 49, and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ozaki (Pat No.: 5502749), In view of Kesner et al. (Pat No.: 6055362), as applied to claim 42 above, and further in view of Hill et al. (Pat No.: 3795772).

For claim 47, Ozaki and Kesner et al. disclosed all the subject matter of the claimed invention with the exception of using the clock signal frequency for phase locked loop processing. Hill et al. from the same or similar fields of endeavor teaches the method of using the clock signal frequency for phase locked loop processing (**see column 3, lines 9-14**). The purpose of VCO 12 is to provide a reference frequency,

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which is phase locked to the clock frequency. Thus, it would have been obvious to the person of ordinary skill in the art at the time of the invention to use the method as taught by Hill et al. in the network of Ozaki and Kesner et al. The motivation for using the method as taught by Hill et al. in the network of Ozaki and Kesner et al. being that the method will maintain to receive frequency with correct phase.

Regarding claim 49, Hill et al. also disclosed the method of the clock source is a voltage controlled oscillator (**see column 3, lines 9-14**). The purpose of VCO 12 is to provide a reference frequency, which is phase locked to the clock frequency, so that signal can be received or recovered correctly.

Regarding claim 52, Hill et al. also disclosed the method of a phase locked loop processor that processes based on the signal frequency (**see column 3, lines 9-14**). The purpose of VCO processor is to provide a reference frequency, which is phase locked based on clock frequency.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAN YUEN whose telephone number is (571)270-1413. The examiner can normally be reached on Monday-Friday 10:00a.m-3:00p.m EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky O. Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Ricky Ngo/

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